Ephemeris for Physical Observations

Greenwich Noon.	Position-angle of ♃'s Axis. P	L−O	Diff.	B	A−L	Apparent Diameter. Equat.	Phase.	Polar.
1894.	°	°		°	°	″	″	″
July 30	359·123	310·908	398	+2·422	− 7·520	33·50	0·14	31·35
Aug. 1	359·309	311·306	394	2·416	7·745	33·62	·15	31·46
3	359·493	311·700	389	2·409	7·965	33·74	·16	31·57
5	359·674	312·089	383	2·402	8·180	33·86	·17	31·69
7	359·853	312·472	377	2·395	8·390	33·99	·18	31·81
9	0·029	312·849	372	+2·388	− 8·594	34·13	0·19	31·94
11	0·203	313·221	367	2·381	8·793	34·27	·20	32·07
13	0·374	313·588	360	2·374	8·986	34·41	·21	32·20
15	0·542	313·948	354	2·367	9·173	34·56	·22	32·34
17	0·707	314·302	347	2·360	9·353	34·71	·23	32·48
19	0·869	314·649	340	+2·353	− 9·528	34·86	0·24	32·62
21	1·028	314·989	334	2·346	9·695	35·02	·25	32·77
23	1·184	315·323	327	2·340	9·856	35·19	·26	32·93
25	1·336	315·650	320	2·333	10·010	35·36	·27	33·09
27	1·485	315·970	312	2·327	10·157	35·53	·28	33·25
29	1·630	316·282	304	+2·320	−10·296	35·71	0·29	33·42
31	1·772	316·586	296	2·314	10·427	35·89	·30	33·59
Sept. 2	1·910	316·882	287	2·307	10·550	36·08	·30	33·76
4	2·044	317·169	279	2·301	10·665	36·27	·31	33·94
6	2·174	317·448	270	2·295	10·771	36·46	·32	34·12
8	2·300	317·718	261	+2·289	−10·869	36·66	0·33	34·31
10	2·421	317·979	252	2·283	10·957	36·87	·34	34·50
12	2·538	318·231	242	2·277	11·036	37·08	·34	34·69
14	2·651	318·473	233	2·271	11·106	37·29	·35	34·89
16	2·759	318·706	223	2·265	11·166	37·50	·35	35·09
18	2·862	318·929	212	+2·260	−11·217	37·72	0·36	35·30
20	2·961	319·141	202	2·255	11·257	37·94	·37	35·51
22	3·055	319·343	192	2·250	11·287	38·17	·37	35·72
24	3·144	319·535	181	2·245	11·306	38·40	·37	35·93
26	3·227	319·716	169	2·240	11·314	38·63	·38	36·15
28	3·305	319·885	157	+2·235	−11·311	38·87	0·38	36·37
30	3·378	320·042	146	2·230	11·297	39·11	·38	36·60
Oct. 2	3·446	320·188	135	2·226	11·271	39·35	·38	36·82
4	3·508	320·323	122	2·222	11·233	39·60	·38	37·05

of Jupiter, 1894-95. By A. Marth.

Greenwich Noon.	Bright-ness.	Longitude of Central Meridian (877°·90) I.	Longitude of Central Meridian (870° 27) II.	Corr. for Phase.	Light-time.	A−O	B
1894.	m	°	°	°	m	°	°
July 30	−1·57	228·63	238·28	+0·25	48·331	303·3910	+2·5612
Aug. 1	−1·58	184·13	178·52	·26	48·164	303·5645	2·5561
3	−1·59	139·64	118·77	·28	47·992	303·7379	2·5510
5	−1·59	95·16	59·03	·29	47·815	303·9113	2·5458
7	−1·60	50·69	359·30	·31	47·634	304·0847	2·5406
9	−1·61	6·23	299·58	+0·32	47·447	304·2580	+2·5354
11	−1·62	321·77	239·86	·34	47·256	304·4313	2·5302
13	−1·63	277·32	180·15	·35	47·060	304·6045	2·5249
15	−1·63	232·88	120·45	·37	46·860	304·7777	2·5196
17	−1·64	188·45	60·76	·38	46·655	304·9508	2·5143
19	−1·65	144·03	1·08	+0·40	46·447	305·1239	+2·5090
21	−1·66	99·62	301·41	·41	46·234	305·2969	2·5037
23	−1·67	55·22	241·75	·42	46·018	305·4699	2·4983
25	−1·68	10·83	182·09	·44	45·797	305·6428	2·4929
27	−1·69	326·45	122·45	·45	45·573	305·8157	2·4875
29	−1·70	282·07	62·82	+0·46	45·346	305·9885	+2·4821
31	−1·71	237·71	3·19	·47	45·115	306·1613	2·4766
Sept. 2	−1·72	193·36	303·57	·48	44·882	306·3340	2·4711
4	−1·73	149·01	243·97	·49	44·645	306·5067	2·4656
6	−1·75	104·68	184·38	·50	44·406	306·6794	2·4601
8	−1·76	60·36	124·79	+0·51	44·164	306·8520	+2·4546
10	−1·77	16·04	65·22	·52	43·921	307·0246	2·4490
12	−1·78	331·74	5·65	·53	43·675	307·1971	2·4434
14	−1·79	287·45	306·10	·54	43·427	307·3696	2·4378
16	−1·80	243·17	246·56	·54	43·177	307·5420	2·4322
18	−1·82	198·90	187·03	+0·55	42·926	307·7143	+2·4266
20	−1·83	154·64	127·51	·55	42·674	307·8866	2·4209
22	−1·84	110·39	68·00	·55	42·421	308·0589	2·4152
24	−1·85	66·16	8·50	·56	42·167	308·2311	2·4095
26	−1·87	21·93	309·01	·56	41·912	308·4033	2·4038
28	−1·88	337 72	249·54	+0·56	41·657	308·5754	+2·3981
30	−1·89	293·52	190·08	·55	41·402	308·7475	2·3923
Oct. 2	−1·91	249·33	130·62	·55	41·147	308·9195	2·3865
4	−1·92	205·15	71·18	·55	40·898	309·0914	2·3807

Greenwich Noon.		Position-angle of ℋ's Axis. P	L−O	Diff.	B	Δ−L	Apparent Diameter. Equat.	Phase.	Polar.
1894.		°	°			°	″	″	″
Oct.	6	3·565	320·445	110	2·218	11·184	39·84	·38	37·28
	8	3·616	320·555	97	+2·214	−11·122	40·09	0·38	37·52
	10	3·661	320·652	85	2·210	11·047	40·34	·37	37·75
	12	3·700	320·737	72	2·207	10·960	40·60	·37	37·99
	14	3·733	320·809	59	2·204	10·861	40·85	·37	38·22
	16	3·760	320·868	47	2·201	10·748	41·10	·36	38·46
	18	3·782	320·915	33	+2·198	−10·623	41·36	0·35	38·70
	20	3·798	320·948	20	2·195	10·485	41·62	·35	38·94
	22	3·807	320·968	6	2·193	10·333	41·87	·34	39·18
	24	3·810	320·974	7	2·190	10·168	42·12	·33	39·42
	26	3·807	320·967	20	2·188	9·990	42·37	·32	39·65
	28	3·798	220·947	34	+2·186	− 9·798	42·62	0·31	39·89
	30	3·782	320·913	47	2·185	9·593	42·87	·30	40·12
Nov.	1	3·760	320·866	61	2·183	9·374	43·12	·29	40·35
	3	3·732	320·805	74	2·182	9·142	43·36	·28	40·58
	5	3·698	320·731	87	2·181	8·897	43·60	·26	40·80
	7	3·658	320·644	100	+2·180	− 8·639	43·84	0·25	41·02
	9	3·612	320·544	113	2·179	8·368	44·07	·23	41·24
	11	3·560	320·431	125	2·178	8·084	44·29	·22	41·45
	13	3·502	320·306	138	2·178	7·788	44·51	·21	41·65
	15	3·439	320·168	150	2·177	7·479	44·73	·19	41·85
	17	3·370	320·018	161	+2·177	− 7·158	44·93	0·18	42·04
	19	3·295	319·857	172	2·177	6·826	45·13	·16	42·23
	21	3·215	319·685	184	2·177	6·483	45·32	·15	42·41
	23	3·130	319·501	194	2·176	6·129	45·51	·13	42·58
	25	3·040	319·307	204	2·176	5·764	45·68	·12	42·74
	27	2·946	319·103	213	+2·176	− 5·389	45·84	0·10	42·90
	29	2·847	318·890	223	2·176	5·005	45·99	·09	43·04
Dec.	1	2·744	318·667	230	2·176	4·612	46·13	·07	43·17
	3	2·637	318·437	238	2·177	4·211	46·26	·06	43·29
	5	2·526	318·199	245	2·177	3·803	46·38	·05	43·40
	7	2·412	317·954	251	+2·177	− 3·387	46·48	0·04	43·50
	9	2·296	317·703	256	2·177	2·966	46·58	·03	43·58
	11	2·177	317·447	261	2·177	2·540	46·65	·02	43·66
	13	2·056	317·186	265	2·177	2·109	46·72	·02	43·72
	15	1·933	316·921	267	2·177	1·674	46·77	·01	43·77
	17	1·808	316·654		+2·177	− 1·236	46·81	0·01	43·80

Greenwich Noon.	Brightness.	Longitude of 𝔏's Central Meridian. (877°·90) I.	(870°·27) II.	Corr. for Phase.	Light-time.	A−O	B
1894.	m	°	°	°	m	°	°
Oct. 6	−1·93	160·98	11·75	·54	40·640	309·2633	2·3749
8	−1·95	116·82	312·34	−0·54	40·388	309·4352	+2·3691
10	−1·96	72·68	252·93	·53	40·137	309·6070	2·3633
12	−1·97	28·55	193·54	·52	39·888	309·7788	2·3574
14	−1·99	344·42	134·15	·51	39·640	309·9505	2·3515
16	−2·00	300·31	74·78	·50	39·395	310·1222	2·3456
18	−2·01	256·22	15·42	+0·49	39·153	310·2938	+2·3397
20	−2·03	212·13	316·07	·48	38·913	310·4654	2·3337
22	−2·04	168·05	256·74	·46	38·677	310·6369	2·3277
24	−2·05	123·99	197·41	·45	38·444	310·8084	2·3217
26	−2·07	79·94	138·10	·43	38·214	310·9798	2·3157
28	−2·08	35·89	78·79	+0·42	37·989	311·1512	+2·3097
30	−2·09	351·86	19·50	·40	37·768	311·3225	2·3036
Nov. 1	−2·10	307·84	320·22	·38	37·552	311·4938	2·2975
3	−2·12	263·83	260·95	·36	37·342	311·6650	2·2914
5	−2·13	219·83	201·69	·34	37·136	311·8362	2·2853
7	−2·14	175·84	142·43	+0·32	36·937	312·0074	+2·2792
9	−2·15	131·86	83·19	·30	36·743	312·1785	2·2731
11	−2·16	87·88	23·96	·28	36·556	312·3495	2·2669
13	−2·17	43·92	324·73	·26	36·376	312·5205	2·2607
15	−2·18	359·96	265·51	·24	36·202	312·6914	2·2545
17	−2·19	316·01	206·30	+0·22	36·036	312·8623	+2·2483
19	−2·20	272·07	147·10	·20	35·877	313·0331	2·2421
21	−2·21	228·14	87·90	·18	35·726	313·2039	2·2358
23	−2·22	184·21	28·71	·16	35·584	313·3746	2·2295
25	−2·23	140·28	329·53	·14	35·449	313·5453	2·2232
27	−2·24	96·36	270·35	+0·13	35·324	313·7160	+2·2169
29	−2·24	52·44	211·17	·11	35·207	313 8866	2·2106
Dec. 1	−2·25	8·53	152·00	·09	35·100	314 0572	2·2043
3	−2·26	324·62	92·83	·08	35·002	314·2277	2·1979
5	−2·26	280·72	33·66	·06	34·913	314·3981	2·1915
7	−2·27	236·81	334·49	+0 05	34·835	314·5685	+2·1851
9	−2·27	192·90	275·33	·04	34·766	314·7388	2·1787
11	−2·28	148·99	216·16	·03	34·707	314·9091	2·1723
13	−2·28	105·08	156·99	·02	34·659	315·0793	2·1659
15	−2·28	61 17	97·82	·01	34·621	315·2495	2 1594
17	−2·28	17·26	38·64	+0·01	34·593	315·4197	+2·1529

This ephemeris is a continuation of that for the preceding apparition of *Jupiter*, published in the May number of 1893, no alteration having been made in the assumed elements. But a column has been added giving the brightness of the planet expressed in star magnitudes, the brightness at mean opposition being assumed to be $-2^{m}\cdot233$ according to Professor G. Müller's determination, and the defect of illumination being allowed for by adding $+5\log\sec.\frac{1}{2}(\Lambda-L)$.

The following is a list of Greenwich mean times when the zero-meridian in the assumed two systems of longitudes will pass the middle of the illuminated disc:

	I. (877°·90)	II. (870°·27)		I. (877°·90)	II. (870°·27)
1894.	h m	h m	1894.	h m	h m
July 30	13 25·7	13 16·8	Aug. 19	15 44·2	19 49·0
	23 16·3	23 12·6	20	11 25·3	15 40·5
31	18 57·5	19 4·1	21	16 57·0	21 27·8
Aug. 1	14 38·7	14 55·7	22	12 38·2	17 19·2
2	0 29·3	0 51·4	23	18 9 8	23 6·5
	20 10·5	20 43·0	24	13 51·0	18 57·9
3	15 51·6	16 34·5	25	9 32·1	14 49·4
4	1 42·2	2 30·3		19 22·6	24 45·2
	21 23·4	22 21·8	26	15 3·7	20 36·6
5	17 4·6	18 13·4	27	10 44·8	16 28·1
6	12 45·7	14 4·9	28	16 16·5	22 15·3
	22 36·3	24 0·6	29	11 57·6	18 6·7
7	18 17·5	19 52·2	30	17 29·3	23 53·9
8	13 58·7	15 43·7	31	13 10·4	19 45·4
	23 49·3	25 39·5	Sept. 1	18 42·0	15 36·9
9	19 30·4	21 31·0	2	14 23·1	21 24·0
10	15 11·6	17 22·5	3	19 54·8	17 15·5
11	10 52·7	13 14·0	4	15 35·8	23 2·6
	20 43·3	23 9·8	5	11 16 9	18 54·1
12	16 24·5	19 1·3		16 48·5	14 45·5
13	12 5 6	14 52·8	7	12 29·6	10 36·9
	21 56·2	24 48·6		22 20·1	20 32·7
14	17 37·4	20 40·1	8	18 1·2	16 24·1
15	13 18·5	16 31·6	9	13 42·3	12 15·5
16	18 50·2	22 18·8		23 32·8	22 11·2
17	14 31·4	18 10·3	10	19 13·9	18 2·6
18	10 12·5	14 1·8	11	14 55·0	13 54·0
	20 3·1	23 57·5		24 45·5	23 49·8

	I. (877°·90)	II. (870°·27)
1894.	h m	h m
Sept. 12	10 36·0	9 45·5
	20 26·5	19 41·2
13	16 7·6	15 32·6
14	11 48·7	11 24·0
	21 39·2	21 19·7
15	17 20·2	17 11·1
16	13 1·3	13 2·5
	22 51·8	22 58·2
17	18 32·8	18 49·6
18	14 13·9	14 41·0
19	0 4·4	0 36·7
	19 45·4	20 28·1
20	15 26·5	16 19·5
21	11 7·5	12 10·9
	20 58·0	22 6·6
22	16 39·0	17 57·9
23	12 20·1	13 49·3
	22 10·6	23 45·0
24	17 51·6	19 36·4
25	13 32·6	15 27·8
26	19 4·1	21 14·8
27	14 45·1	17 6·2
28	10 26·1	12 57·5
	20 16·6	22 53·2
29	15 57·6	18 44·6
30	11 38·6	14 35·9
	21 29·1	24 31·6
Oct. 1	17 10·1	20 23·0
2	12 51·1	16 14·3
3	8 32·1	12 5·6
	18 22·6	22 1·3
4	14 3·6	17 52·6
5	9 44·6	13 44·0
	19 35·1	23 39·7
6	15 16·0	19 31·0
7	10 57·0	15 22·3
8	16 28·5	21 9·3

	I. (877° 90)	II. (870°·27)
1894.	h m	h m
Oct. 9	12 9·4	17 0·6
10	7 50·4	12 51·9
	17 40·9	22 47·6
11	13 21·8	18 38·9
12	9 2·8	14 30·2
	18 53·3	24 25·9
13	14 34·2	10 21·5
	24 24·7	20 17·2
14	10 15·2	16 8·5
15	5 56·1	11 59·8
	15 46·6	21 55·4
16	11 27·5	17 46·7
17	7 8·5	13 38·0
	16 59·0	23 33·7
18	12 39·9	9 29·3
	22 30·3	19 25·0
19	8 20·8	15 16·2
	18 11·3	25 11·9
20	13 52·2	11 7·5
	23 42·7	21 3·2
21	9 33·1	6 58·8
	19 23·6	16 54·4
22	15 4·5	12 45·7
	24 55·0	22 41·4
23	10 45·4	8 37·0
	20 35·9	18 32·6
24	6 26·4	14 23·9
	16 16·8	24 19·5
25	11 57·7	10 15·2
	1 48·2	20 10·8
	17 29·1	16 2·1
27	13 10 0	11 53·3
	23 0·4	21 48·9
28	8 50·9	7 44·6
	18 41·3	17 40·2
29	14 22·2	13 31·5
	24 12·7	23 27·1

	I. (877°·90)	II. (870°·27)		I. (877°·90)	II. (870°·27)
1894.	h m	h m	1894.	h m	h m
Oct. 30	10 3·1	9 22·7	Nov. 18	6 43·0	10 0·7
	19 53·6	19 18·3		16 33·5	19 56·3
31	15 34·5	15 9·6	19	12 14·3	5 51·9
Nov. 1	11 15·4	11 0·8		22 4·7	15 47·5
	21 5·8	20 56·4	20	7 55·1	11 38·7
2	6 56·2	6 52·0		17 45·6	21 34·3
	16 46·7	16 47·7	21	13 26·4	7 29·9
3	12 27·6	12 38·9		23 16·8	17 25·5
	22 18·0	22 34·5	22	9 7·2	13 16·6
4	8 8·5	8 30·1		18 57·6	23 12·2
	17 58·9	18 25·8	23	4 48·0	9 7·8
5	13 39·8	14 17·0		14 38·5	19 3·4
	23 30·2	24 12·6	24	10 19·3	14 53·6
6	9 20·6	10 8·2		20 9·7	24 49·2
	19 11·1	20 3·8	25	6 0·1	10 45·8
7	5 1·5	5 59·4		15 50·5	20 41·4
	14 51·9	15 55·0	26	11 31·4	6 36·9
8	10 32·8	11 46·3		21 21·8	16 32·5
	20 23·3	21 41·9	27	7 12·2	12 23·7
9	6 13·7	7 37·5		17 2·6	22 19·3
	16 4·1	17 33·1	28	12 43·4	8 14·9
10	11 45·0	13 24·3		22 33·8	18 10·4
	21 35·1	23 19·9	29	8 14·2	14 1·6
11	7 25·8	9 15·5		18 4·6	23 57·2
	17 16·3	19 11·1	30	13 55·4	9 52·8
12	12 57·1	15 2·3		23 45·9	19 48·4
	22 47·5	24 57·9	Dec. 1	9 36·3	5 44·0
13	8 38·0	10 53·5		19 26·7	15 39·5
	18 28·4	20 49·1	2	5 17·1	11 30·7
14	14 9·2	6 44·7		15 7·5	21 26·3
	23 59·7	16 40·3	3	10 48·3	7 21·9
15	9 50·1	12 31·5		20 38·7	17 17·5
	19 40·5	22 27·1	4	6 29·1	13 8·6
16	5 30·9	8 22·7		16 19·5	23 4·2
	15 21·4	18 18·3	5	12 0·3	8 59·8
17	11 2·2	14 9·5		21 50·7	18 55·4
	20 52·6	24 5·1	6	7 41·1	4 50·9

1894.		I. (877°·90) h m	II. (870°·27) h m	1894.		I. (877°·90) h m	II. (870°·27) h m
		17 31·5	14 46·5	Dec.	12	11 17·2	9 44·7
Dec.	7	13 12·4	10 37·7			21 7·6	19 40·2
		23 2·8	20 33·3		13	6 58·0	5 35·8
	8	8 53·2	6 28·8			16 48·4	15 31·4
		18 43·6	16 24·4		14	12 29·2	11 22·6
	9	4 34·0	12 15·6			22 19·7	21 18·2
		14 24·4	22 11·2		15	8 10·1	7 13·7
	10	10 5·2	8 ·8			18 0·5	17 9·2
		19 55·6	18 2·3		16	3 50·9	3 4·9
	11	5 46·0	3 57·9			13 41·3	13 0·5
		15 36·4	13 53·5			23 31·7	22 56·1

(*To be concluded in the supplementary number.*)

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Errata in Monthly Notices of the Royal Astronomical Society.

Vol. lii. p. 603, line 9 from top, *for* there *read* three.
„ liii. p. 71, *insert* 28 opposite to 16 31 47.
„ „ 73, line 29 from top, *for* 1375 *read* 1395.
„ „ 341, at foot of page, *for* +0 *read* +0·7.
„ „ 369, opposite to γ Virginis, *for* 12 56 *read* 12 36.
„ „ 370 „ „ „ 12 56 „ 12 36.
„ „ 371, opposite to Ref. No. 39, *delete* 1, 2.
„ „ 372 „ „ „ 64, *for* 2 41 E *read* 2 46 E.
„ „ 501, lowest line, *for* 1·3 *read* 61·3.
„ liv. p. 33, line 23 from top, *for* filing *read* filmy.
„ „ 123, line 16 from top, under Position Angle *insert* °, and *delete* " under No. of Obs.
„ „ 123, line 30 from top, *for* 206″·8 *read* 206°·8.
„ „ 238, line 20 from top, *for* places *read* phases.

J. T.

1894 *April* 29.